IN THE DRAWINGS:

Please cancel Figure 2 of the drawings currently on file and replace it with the attached Replacement Sheet of revised Figure 2.

REMARKS

In the office Action, the Examiner rejected Claims 8, 21 and 22, which are all of the pending claims, under 35 U.S.C. 112 as being indefinite. Claim 8 was further rejected under 35 U.S.C. 103 as being unpatentable over U.S. Patent 5,777,773 (Epworth). The Examiner also objected to the drawings as not showing all the features recited in Claim 21. Claims 21 and 22 were not rejected over the prior art, and the Examiner indicated that Claim 21 would be allowable if rewritten or amended to overcome the rejection under 35 U.S.C. 112.

Claims 8 and 21 are being amended to better define the subject matters of these claims.

In addition, an amended Figure 2 is being submitted herewith to address the Examiner's objection to the drawings. More specifically, in the Office Action, the Examiner objected to the drawings as not showing "the modulation scheme to add the control data" to the optical signal, as recited in Claim 21. This control modulation scheme is shown in Figure 2, and discussed in the specification on pages 5 and 6.

With reference to Figure 2, the wavelength of a laser diode 22 is controlled by a circuit from a source 24; and to add the control data to the laser output, the laser voltage bias is modulated by a dithering current from signal generator 26. Variations in the laser bias produce a corresponding dither in the center wavelength of the laser output 30. This modulation, and in particular, the difference between this center wavelength of the laser and the center wavelength of a filter mechanism, represent the encoded data.

As explained in the specification, on page 6, lines 1-8, the laser center wavelength can be modulated over a range of about 0.4 to 0.8 nm without interfering with adjacent channels in the optical network. Thus, for instance, a wavelength difference of –0.4nm may represent a logical zero, and a wavelength difference of about +0.4 may represent a logical one.

In order to more clearly show this aspect of the invention in the drawings, Figure 2 is being amended to indicate expressly that the control data is applied to an input of the laser diode 22 - specifically, the input that receives the signal from bias circuit 24.

In view of the above-discussion, it is believed that all the features described in Claims 8, 21 and 22 are shown in the drawings, and the Examiner is asked to reconsider and to withdraw the objection to the drawings.

In rejecting the claims under 35 U.S.C. 112, the Examiner commented that, in Claims 8 and 21, it is unclear how the difference between the center wavelengths of the filter mechanism and the optical signal is established by merely modulating the center wavelength of the optical signal.

Claims 8 and 21 are being amended to re-phrase the modulating step. In particular, the modulating step is being changed to "changing the length of the center wavelength of the optical signal to establish a difference between the length of the center wavelengths of the optical signal and the filter mechanism. Claims 8 and 21 are also being amended to indicate expressly that this length difference, between the center wavelengths of the optical signal and the filter mechanism, represents data.

Thus, the data are encoded in the optical signal by establishing a difference between the length of the wavelength of that optical signal and the length of the center wavelength of the filter mechanism. As discussed above, and as explained on paged 5 and 6 of the specification, variations

in the laser bias produce a corresponding dither in the center wavelength of the laser output 30. This modulation, and in particular the difference between this center wavelength of the laser and the center wavelength of a filter mechanism, represents the encoded data.

In view of the above-discussion and the amendments made herein, Claims 8 and 21, and Claim 22 which is dependent from Claim 21, are clear and definite. The Examiner is thus also asked to reconsider and to withdraw the rejection of Claims 8, 21 and 22 under 35 U.S.C. 112.

Neither of Claims 21 or 22 was rejected over the prior art, and it is believed that Claims 21 and 22 are now in condition for allowance, an indication of which is respectfully requested.

With respect to the rejection of Claim 8 under 35 U.S.C. 103, Applicants respectfully submit that the prior art does not disclose or suggest the specific way that is described in Claim 8 for encoding specific data values into the optical signal.

To elaborate, Claim 8 is directed to one aspect of the preferred embodiment of the invention – how to encode specific data values into the optical signal. As described in Claim 8, this involves three separate steps: (i) a look-up table is provided having wavelength differences associated with data values, (ii) a wavelength difference for a specific data value is obtained from this look-up table, and (iii) that data value is encoded in the optical signal by establishing that obtained wavelength difference between the center wavelength of the optical signal and the center wavelength of a filter mechanism.

These three steps of Claim 8 distinguish this claim patentably from the prior art, including Epworth, et al.

Epworth, et al. discloses an optical frequency control system in which a feedback signal may be used. Epworth refers to a dither-induced frequency modulation of a laser source. However, the resulting feedback signal discriminates only that portion of the dither-induced amplitude modulation (after passing through the filter), which is in phase quadrature with the applied dither (see Abstract for Epworth). Further, Epworth locks the peak of a narrowband component to a filter response curve by driving an error signal to zero (Col. 1, lines 59-60, and Col. 2, lines 19-23). Clearly, then, Epworth, et al. does not disclose or suggest the use of a look-up table to help encode data into an optical signal, as described in Claim 8.

With the present invention, a range of wavelength modulation states may be used to encode data in the changing wavelength - the wavelength may be changed to one of a predetermined number of states depending on the data being transmitted. The use of a look-up table, as described in Claim 8, to associate wavelength differences with data values, helps to achieve this.

The other references of record have been reviewed, and these other references, whether considered individually or in combination, also do not disclose or suggest encoding data values into an optical signal in the manner described in Claim 8.

Because of the above-discussed differences between Claim 8 and the prior art and because of the advantages associated with those differences, Claim 8 patentably distinguishes over the prior art and is allowable. The Examiner is, hence, asked to reconsider and to withdraw the rejection of Claim under 35 U.S.C. 103, and to allow this claim.

For the reasons set forth above, the Examiner is respectfully requested to reconsider and to withdraw the objection to the drawings, the rejection of Claim 8 under 35 U.S.C. 103, and the rejection of Claims 8, 20 and 21 under 35 U.S.C. 112, and to allow Claims 8, 21 and 22. If the Examiner believes that a telephone conference with Applicants' Attorneys would be advantageous to the disposition of this case, the Examiner is asked to telephone the undersigned.

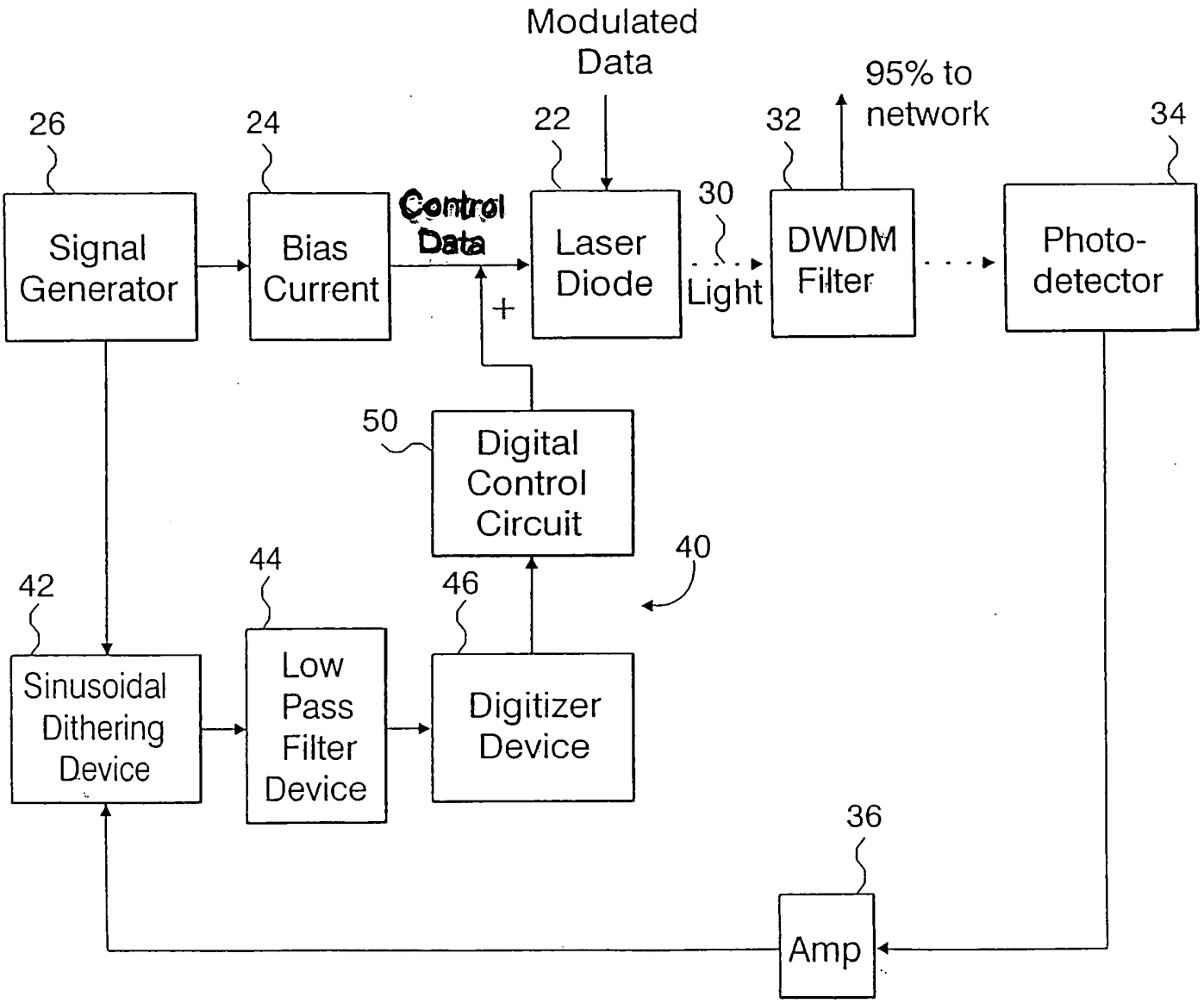
Respectfully submitted,

John S. Sensny

John S. Sensny
Registration No. 28,757
Attorney for Applicants

SCULLY, SCOTT, MURPHY & PRESSER, P.C.
400 Garden City Plaza, Suite 300
Garden City, New York 11530
(516) 742-4343

JSS:jy
Enclosure: Replacement Sheet for revised Figure 2 of the drawings



MPLS/RSVP Modulator in Each Network Node, Transmit Side

Figure 2